

REMARKS

Amendment to the specification:

Applicants, herein, submit a substitute specification that is attached to the back of this response. No new matter has been added in any way to this substitute specification. Apparently, the specification that is in the Examiner's possession was missing some letters in certain words. Applicants believe that this substitute specification addresses the objections.

Status of the claims:

With the above amendments, claims 1, 7, and 8 have been amended and claims 5 and 6 have been canceled. Claim 1 has been amended by the incorporation of the subject matter of claims 5 and 6. Claims 7 and 8 have been amended to correct dependency. Thus, claims 1-4 and 7-10 are pending and ready for further action on the merits. No new matter has been added by way of the above amendments. Reconsideration is respectfully requested in light of the following remarks.

Objections

The Examiner has objected to the written description for informalities. The Examiner asserts that there are spelling errors at page 5 line 1, page 18 line 1, and page 19 line 1. In a conversation with the Examiner on February 13, 2004, the Examiner

indicated that the first "e" in "ethylenically" was missing in the copy of the specification that he had. Applicants, however, did not have this missing in their copy of the written description. Thus, Applicants, herein, submit a new copy of the specification that does not have this omission. Applicants believe that this copy of the specification also addresses the other objections enumerated by the Examiner. Withdrawal of the objection is warranted and respectfully requested.

Rejections under 35 USC §112, first paragraph

Claims 1-10 are rejected under 35 USC §112, first paragraph as allegedly lacking description.

Applicants traverse.

The Examiner asserts that there is no support for the description regarding how the milliequivalents of hydrochloric acid relates to the amount of acid monomer(s) for a copolymer. The Examiner asserts that Comparative Example 3 contains a composition that appears to fall within the claimed composition of claim 1 except for the ratio (in milliequivalents) of the acid bonded or adsorbed to the copolymer surface plus the acid groups present in the aqueous phase relative to the mass of copolymer. The Examiner contrasts Comparative Example 3 to Example 2 that discloses a composition that also falls within the claimed composition but has a ratio (in milliequivalents) of the acid bonded or adsorbed to the

copolymer surface plus the acid groups present in the aqueous phase relative to the mass of copolymer that also falls within the claimed scope. Thus, the Examiner asserts that undue experimentation would be necessary to figure out if a copolymer falls within the scope of the claim.

First, Applicants are not sure if the Examiner is issuing an enablement rejection or a written description rejection. Applicants assert that the legal test for an enablement rejection is whether or not one of skill in the art can make and use the invention without undue experimentation whereas a written description rejection has as its legal test whether or not one of skill in the art had possession of the claimed invention at the time of filing the application. Applicants, below, show that the instant invention is both enabled and adequately described.

Applicants respectfully point out that the phrase "the sum of the amount of acid groups bonded to or adsorbed on the surface of the copolymer constituting the latex and the amount of acid groups present in the aqueous phase of the copolymer latex" means the difference between the total amounts of acid groups present in the entire copolymer latex and the amount of acid groups present within the copolymer latex particles. Applicants submit that the specified sum of the amounts of acid groups is determined depending not only upon the particular kind and amount of monomers, but also

on other factors such as the polymerization procedure, pH of the polymerization system and the kinds and amounts of emulsifier.

Applicants asserts that there are many working examples present in the instant written description that fall within the scope of the claims of the present invention and many comparative examples that do not fall within the scope of the instant invention. Applicants believe that by reference to these working examples, one of skill in the art could produce the claimed dip-forming copolymer latex without undue experimentation. Accordingly, Applicants submit that the claims are completely enabled.

Moreover, at page 17, line 7 to page 18, line 26 (page 16, line 14 to page 17, line 31 of the substitute specification) there is adequate description as to how one of skill in the art would obtain the ratio without undue experimentation. Applicants also believe that this detailed procedure for obtaining this ratio shows that Applicants had possession of the invention at the time the invention was filed. Accordingly, Applicants submit that a written description rejection is inapposite. Withdrawal of the rejection is warranted and respectfully requested.

Rejections under 35 USC §§102/103

Claims 1-4 and 8-10 are rejected under 35 USC §102(b) as being anticipated by, or in the alternative, under 35 USC §103(a) as being unpatentable over Ozawa '166 (US Patent No. 5,369,166).

Claims 1-10 are rejected under 35 USC §103(a) as being unpatentable over Ozawa '166 and Branlard '609 (US Patent No. 3,984,609).

Claims 1-4 and 9 are rejected under 35 USC §102(b) as being anticipated by, or in the alternative, under 35 USC §103(a) as being unpatentable over Kuan '857 (US Patent No. 4,436,857).

Claims 1-10 are rejected under 35 USC §103(a) as being unpatentable over Kuan '857 and Branlard '609 (US Patent No. 3,984,609).

Applicants traverse.

Present Invention

The present invention, as recited in claim 1, relates to a latex for dip forming wherein the latex comprises a copolymer prepared by copolymerizing 10 to 90% by weight of a conjugated diene monomer, 0.1 to 20% by weight of an ethylenically unsaturated acid monomer and 10 to 89.9% by weight of other ethylenically unsaturated monomer or monomers copolymerizable therewith. The sum of the amount of acid groups bonded to or adsorbed on the surface of the copolymer constituting the latex and the amount of acid groups present in the aqueous phase of the copolymer latex is in the range of 0.1 to 2 milli-equivalent in terms of hydrochloric acid, per gram of the copolymer. The latex for dip forming

contains 0.1 to 3 parts by weight of a phenolic antioxidant, based on 100 parts by weight of the solid content in the copolymer latex.

Disclosure of Ozawa '166

Ozawa '166 discloses a copolymer latex which comprises 30 to 90% by weight of a conjugated diene monomer unit, 9 to 50% by weight of an ethylenically unsaturated nitrile monomer unit, 0.1 to 20% by weight of an ethylenically unsaturated acid monomer unit and 0 to 20% by weight of an other ethylenically unsaturated monomer unit copolymerizable. The copolymer latex has a polystyrene-converted weight average molecular weight of 50,000 to 500,000, and contains 45% or less of methyl ethyl ketone insoluble matter. The latex is presented by emulsion polymerization using a polymerization initiator containing a peroxide whose decomposition temperature giving a half-life period of 10 hours is 100° C or higher and a reducing agent. The latex is said to be used advantageously for dip molding.

Disclosure of Branlard '609

Branlard '609 discloses a process for instantaneous peptization of polychloroprene latexes made by polymerizing in the presence of sulfur and a modifying agent such as iodoform or a dialkylxanthogen disulfide, by adding a suitable thiol at a pH at least equal to 9.

Disclosure of Kuan '857

Kuan '857 discloses a carboxylated polymer latex containing a minor amount by weight of a heat sensitizer sufficient to gel the polymer and which also can contain fillers, wetting agents and stabilizers. Kuan '857 discloses the carboxylated polymer latex can be used to provide a water resistant film on the surface of a rubber compound or composition, which subsequently can be cooled rapidly with water and dried. The resulting latex coated rubber can then be stacked or assembled without sticking.

Removal of the Rejection over Ozawa '166 or Kuan '857

Applicants respectfully point out that the Examiner did not reject claims 5 or 6 over either of Ozawa '166 or Kuan '857 used alone. Because claim 1 has been amended by the incorporation of claims 5 and 6, Applicants believed that the rejections over Ozawa '166 or Kuan '857 used alone have been obviated. Withdrawal of the rejection is warranted and respectfully requested.

In particular, neither Ozawa '166 nor Kuan '857 disclose or suggest that the latex for dip forming contains 0.1 to 3 parts by weight of a phenolic antioxidant, based on 100 parts by weight of the solid content in the copolymer latex. Further, neither Ozawa '166 nor Kuan '857 disclose or suggest the polymerization conditions that one of ordinary skill would use to arrive at the

instant invention. The specified sum of the amounts of acid groups is not inherent to the latex of Ozawa '166 or Kuan '857. Accordingly, for this reason also, withdrawal of the rejections is warranted and respectfully requested.

Removal of the Rejections over Ozawa '166 or Kuan '857 in view of Branlard '609

Branlard '609 teaches that a phenolic antioxidant can be added to a polychloroprene latex to improve its storage stability. However, Applicants submit that Branlard '609 is silent on the latex of a copolymer of the conjugated diene/acid monomer/copolymerization monomer. In the copolymer latex of the present invention, a phenolic antioxidant is important for giving a dip-formed article good resistance to pinking (i.e., pink staining) as described at page 11, third full paragraph of the written description. Dip-formed articles are ordinarily subjected to chlorination treatment to avoid undesirable sticking of dip-formed articles to each other, and when the chlorination treatment is carried out, the treated dip-formed articles are liable to be subject to pink staining. As specifically described at page 26 of the written description, undesirable pinking of dip-formed articles can be minimized with a phenolic antioxidant (see Examples 11, 12, and 13), but the desired pinking resistance is not obtained with

other antioxidants such as amine antioxidants (Examples 14 and 15) and Ni dithiocarbamate antioxidants (see Example 16).

Applicants believe that this pinking resistance would never be expected from Branlard '609, and thus, Branlard '609 gives no motivation for incorporating a phenolic antioxidant in the copolymer latex described in Ozawa '166 or Kuan '857. Accordingly, the Examiner has failed to make out a proper *prima facie* case of obviousness with regard to the 35 USC §103(a) rejection over either of Ozawa '166 or Kuan '857 in combination with Branlard '609. Three criteria must be met to make out a *prima facie* case of obviousness.

- 1) There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
- 2) There must be a reasonable expectation of success.
- 3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

See MPEP §2142 and *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). In particular, the Examiner has failed to meet the second element to make a proper *prima facie* obviousness rejection. The motivation is simply lacking as argued above.

Applicants submit that even if a proper *prima facie* obviousness rejection were presented by any of Branlard '609, Ozawa

'166, or Kuan '857 (which Applicants do not concede), the instant invention possesses characteristics that would never be surmised by the cited references. In particular, none of the cited references disclose or suggest the anti-pinking properties of the instant invention. For this reason also, the rejections are inapposite.

Moreover, Applicants respectfully point out that only Ozawa '166 mentions a glove as claimed in claim 10 of the present invention (see column 9, line 65 in Ozawa '166). Thus, Applicants submit that the Examiner has failed to establish a proper *prima facie* obviousness rejection with regards to the rejection of claim 10 over Kuan '857 and Branlard '609. All of the elements of claim 10 are not disclosed or suggested by these references. Accordingly, the rejection of claim 10 over these references is inapposite.

Thus, Applicants submit that with the above remarks, that none of Branlard '609, Ozawa '166 or Kuan '857 can anticipate or render obvious the instant invention, either used separately or combined. Withdrawal of the rejections is warranted and respectfully requested.

With the above remarks and amendments, Applicants believe that the claims, as they now stand, define patentable subject matter such that passage of the instant invention to allowance is warranted. A Notice to that effect is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact T. Benjamin Schroeder (Reg. No. 50,990) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. 1.17 and 1.136(a), Applicants respectfully petition for a three (3) month extension of time for filing a response in connection with the present application. The required fee of \$950.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment(s): Substitute Specification
Marked-up copy of Specification

(Rev. 02/12/2004)